

Comment 8: Landsburg Mine Public Meeting - Questions and Answers
Chief Respondents: Jerome Cruz, Department of Ecology;
Douglas Morell, Golder Associates

8.1 Question: What is the scope of comments you would like to receive by February 15?

Answer: Comments on the Amendment to the Agreed Order re: Contingent Groundwater System

8.2 Question: The Pad set up that you described seems to be very small. Will it be able to accommodate an adequate treatment system?

Answer: The treatment systems are surprisingly small and compact and would fit on the proposed pad.

8.3 Question: How are you going to filter out PCBs? What kind of treatment system will you use?

Answer: If treatment is required for PCBs, there will likely be a Carbon Unit in the system.

8.4 Question: If you find contamination, how long will it take to create/implement a treatment system?

Answer: The treatment systems are off the shelf and we could order one quickly. It will likely take 2-3 months to have an operational treatment system. This may seem like a long time, but due to the slow rate of groundwater flow, once we anticipate a problem we will have about a year before treatment is needed.

8.5 Question: How long will it take to install the system to capture contamination from the Southern Portal?

Answer: It will take about 3 months to design, construct, and connect Southern Portal to the treatment system at the Northern Portal.

8.6 Question: What is the frequency of monitoring at the Southern Portal?

Answer: Detection Levels for the wells are lower than standards. Frequency of monitoring for the whole site will be a topic of future technical discussion.

8.7 Question: In the school district there is land set aside for future schools. Why will you connect the pipeline to the school property? How will you ensure safety?

Answer: The pipeline will be safely connected to the sewer line. The water will be pre-treated to levels mandated by King County. It is not our intent to impact the schools capacity. There will be negotiations for compensation to the school district.

8.8 Question: Is there any reason why you can't get treated water down to non-detectable levels?

Answer: The short answer is yes; you can treat the water to any level, however the lower the level the more difficult and the less reliable the system is. But it is possible.

8.9 Question: At this time does the sewer line go to the school and stop? Is it a CSO?

Answer: No, the dedicated line goes to the school for sanitary sewer only, it's not a CSO.

8.11 Question: Are there any problems with the monitoring wells now?

Answer. They are all fine. We have only found iron and manganese in the monitoring wells, which is typical for waters in former coal mining areas.

8.12 Question: The mines currently have a lot of water in them. Could that be diluting contaminants? If you are pumping at 35 gallons per minutes, would the contamination be a lot more concentrated?

Answer: The contamination must first be made soluble before it becomes mobilized in liquid form. There can be dilution. What we are talking about though is containing the groundwater plume, not dewatering the mine. We will be focusing on contamination within the capture zone. Pumping groundwater should not cause contamination to become more concentrated.

8.13 Question: Is the drinking water in wells safe today?

Answer: Nothing was found in the 1990's and nothing was found in the most recent round of tests.

8.14 Question: You have not announced any results from the Deep Well to the public. How many samples were taken and what did you find?

Answer: (Referring to the deep north portal well LMW-10) Four initial samples were taken for representative VOC's only. The samples, which were taken before the groundwater in the well, had stabilized. They contained benzene (at 0.5ppb), toluene at about the same level (below drinking standards) and xylene (below drinking standards as well). The detections

were most likely due to rotary air drill that was used to drill the well. The way an air rotary drill works is it blows air at high pressure. The motor burns diesel and uses transmission fluid, which can add benzene and toluene to the compressor air that, goes down the borehole. Subsequent samples from the well are all non-detect for the constituents of concern.

8.15 Question: Before people send their comments in, they would like to know the sampling results from the Deep Well. You haven't provided any data yet.

Answer: (Referring to the recently installed deep southern well LMW-11) We want to do a complete analysis on a whole suite of chemicals and run Quality Assurance/Quality Control so we can share data that we know is right. We will be sampling next week and there will be a Fact Sheet sent out with sampling results.

8.16 Question: Do you have any data on private wells? Will you be re-sampling private wells? Is my well safe?

Answer: Private Wells were most recently monitored in 1996 and no contamination was found. We don't have any justification to resample private wells at this time.

8.17 Question: Because of extraction and preferential flow the seams are keeping water isolated, is that right?

Answer: Yes

8.18 Question: Sampling wells only pull water when you are actively sampling, is that correct?

Answer: Yes

8.19 Question: What is the rate of flow through the seams?

Answer: The rate of groundwater flow in the coal seams is estimated to be about 30 to 40 gallons per minutes

8.20 Question: Are you monitoring in the seams and in the bedrock?

Answer: Yes (except for LMW-11, which is in the former southern interior near the lowest level of the former mine). This is where we are monitoring: At the Southern Portal there is a shallow well, a 250 ft well, and a 50-foot well at the mine. LMW-11 is 700 ft deep well and LMW-9 is between LMW-11 and the portal. It is shallow. At the Northern Portal, there is LMW-4 at 400 ft, LMW-2, which is a shallow well, and LMW-10 at 300 ft. LMW-1 is 150 ft deep located at the water table on the rock ridge between the mines.

8.21 Question: Are the groundwater flows representative of contaminant flow?

Answer: No. Contaminants don't move at the same rate as water. It is called retardation. That is why when we start detecting low levels we should see a slow increasing trend in contaminant concentrations.

8.22 Question: Do private wells get monitoring well reports?

Answer: Yes, they were sent out to the owners in the 90's.

8.23 Comment: No one has ever tested my well.

Answer: The private well sampling during the RI/FS stage in 1996 inventoried all the wells at the time and selected wells for sampling according to criteria that includes plausible hydraulic communication with the site with respect to the primary flow paths from the mine portals, and in bedrock in a direction orthogonal to the Roger seam. Other wells did not meet these criteria and so were not sampled.

8.24 Question: Does a lot of water move through fractures in the coal? Shouldn't there be a lot of water moving? How slow are organic particles moving?

Answer: Contaminant mobility varies. Organics would rather stick to soil particles, than mobilize in the water.

8.25 Question: There have been a lot of private wells put in since 1996. Some are closer to the well and deeper than the ones originally tested.

Answer: There has been no evidence in the 1996 private well sampling that contamination left the mine. Since then we have been monitoring the most likely pathways of the water leaving the mine and we haven't found any contamination in the water leaving the mine. Sampling took place before the 1996 round of sampling and nothing was found then either.

8.26 Comment: I bought property in this area—one of the ones that had sampling done in '96. I sold that property and bought another property and had it tested myself. If you are concerned about your water, just have it tested. It's pretty simple and not that expensive.

8.27 Question: The City of Kent disagrees with the geologic model that you displayed tonight, specifically the role that fractures play, how water is distributed, and movement of potential contaminants.

Answer: Noted. We are working with the City of Kent. We will be splitting the water from the deep well for sampling with the City of Kent. They are concerned with their water source.

8.28 Question: There are about 150 acres that could potentially become developed in the future. That will change the surface hydrology. Is your system going to be ready for build out conditions?

Answer: MTCA does not have authority over the future use of property. However, the comment on surface flow is not directly relevant to the proposal, nor is there any basis provided for such statements.

8.29 Question: Would the water you pump out of the well impact flow of Rock Creek? How will you protect the Chinook?

Answer: We will be pumping a relatively small amount and slow rate of water under the plan to use the north portal wells. This system is not hydraulically connected directly to Rock Creek. It is hard to answer the exact number for the flow rate out of the south portal.

8.30 Question: Where did you get the numbers to determine the 30 gallons per minutes pumping (gallons per minutes) rate?

Answer: This is from surface overland flow, drainage precipitation, water movement through bedrock, and mining records. 30-35 gallons per minutes will be a long-term average without a cap (low permeability soil cap over parts of the subsidence trench). With a cap, that number may go down to about 5 gallons per minutes.

8.31 Question: What are the potential effects on Cedar River with discharge out of the North Portal? What do you expect to see as contaminants?

Answer: We are concerned with Fish Habitat. We are probably looking at VOC contaminants and others. We take the groundwater monitoring results and compare them with the surface water standards to make sure they are at a lower than any level of concern. So far there has been nothing detected at any level.

8.32 Question: How long does it take to install the infrastructure that you are proposing?

Answer: Once the design is set it will take about 1 month to build.

8.33 Question: Why do you need to put the pipeline in now? If it only takes a month to do, why not wait until you detect something?

Answer: We are doing it now to prevent further delays. There is a whole process that we are in now, including public review, permits, etc. We want to hit the ground running and be prepared if we detect contamination.

8.34 Question: What is your long-term plan for this infrastructure? Will this be in place until the problem is solved?

Answer: Once the cleanup action is complete, we will monitor in perpetuity. When we say cleanup, we mean containment. The contamination on this site will not be removed, but rather contained. There will be a 5-year review and 10-year review. We will need the infrastructure and treatment facility as an integral part of the permanent remedy.

8.35 Question: Could we do the plan, design, and review for the infrastructure now, but not build it until it's necessary?

Answer: No, we think it's better to do now than later.

8.36 Comment: What if the PLPs go bankrupt? (made in response to question 8.35)

8.37 Question: Are there other ways to store and truck the water for 1 month as you build the infrastructure?

Answer: Yes, that is possible in the short term.

8.38 Question: Did you ever consider removing contaminants from the site and not just putting a cap on it?

Answer: In 1996, they conducted a Remedial Action/Feasibility Study (RI/FS) which looked at the alternatives for cleanup, including waste removal. We determined that there was no way we could safely remove the contaminants, and be sure that it's all out. The cap is all that will accomplish the cleanup safely and effectively.

8.39 Question: When do you expect the CAP (Cleanup Action Plan) to be available for review?

Answer: There have been several starts and stops since 2004. A draft CAP should be available soon. The public will be invited to comment on that when the CAP is up for review. The PLP wants to do the CAP as soon as possible.

Comment 9: King County

Key Concerns: Pipe Connection and Placement, King County Requirements

King County appreciates the opportunities we have had to meet with you and your staff on the proposed changes to the Agreed Order and the State Environmental Policy Act documents. Several King County staff also attended the public meeting conducted by the Department of Ecology on February 7, 2006 to listen to questions and comments from the community. I have reviewed the proposal with knowledgeable King County staff in our department of Development and Environmental Services (DES), Natural Resources and Parks (DNF), and Public Health (DPH). Our comments are as follows:

- 9.1 King County agrees in concept to allow the dry sewer pipe from the mine site to be placed in the ground, and left unconnected and unused, until monitoring determines that contaminants threaten public health and safety.**

Ecology's Response:

Ecology and the PLPs will follow King County's recommendation to install the pipe in the ground and unconnected to the sewer line until monitoring determines there is a threat to public health and safety. This will be based on monitoring at the site and action levels based on monitoring data. The proposed pipeline is a dedicated pipeline for the discharge of treated groundwater, not a sewer line.

The PLPs will work with King County DES, and the relevant parties including the Tahoma School District to work on other issues relevant to physical connection to the sewer system. This includes drafting an agreement to physically connect the pipeline when conditions warrant it.

- 9.2 The sewer pipe from the mine to the Tahoma School District's Jr. High School will be a tight line dedicated solely for the disposal of waters from the mine and only upon determination of a threat to public health and safety, as required by the King County Code.**

Ecology's Response:

Ecology and the PLPs agree with this statement, as it was always the original intention to use the pipeline solely for the Contingent Groundwater Treatment System. The proposed pipeline is a dedicated pipeline for the discharge of treated groundwater, not a sewer line.

- 9.3 An amendment to the Soos Creek Sewer District Comprehensive Plan approved by the King County Council will be required prior to the connection from the mine site to the Tahoma School District tightline sewer line. This amendment will address the new tightline sewer to serve the mine site and the**

proposed connection to the existing tight line sewer serving the school. Additionally, the Department of Ecology will presumably need to coordinate and obtain approval from Soos Creek and the School District to connect to their facilities.

Ecology's Response:

Ecology and the PLPs agree with this statement, but clarifies that the proposed pipeline is a dedicated pipeline for the discharge of treated groundwater, not a sewer line.

Under the conditions of the second amendment to the Agreed Order, the PLPs will work on the approval and consultation process with King County, with Ecology approval.

- 9.4 Based on comments raised at the February 7, 2006, public meeting, King County will further analyze placing the sewer pipe under the Summit-Landsburg Road rather than placing the pipe through the King County park land as currently proposed by the Department of Ecology. We will work with you to develop a schedule to allow for this analysis. It is Ecology's expectation that these changes will be done in a timely fashion to prevent undue delay in implementing the infrastructure proposal.**

Ecology's Response:

Ecology agrees with this statement. The proposed pipeline is a dedicated pipeline for the discharge of treated groundwater, not a sewer line.

- 9.5 Monitoring reports of test wells at the mine site must be routinely sent by either the Department of Ecology or the site trustee to the Environmental Health Division of Public Health-Seattle and King County, with appropriate staff as identified by the Division.**

Ecology's Response

Ecology, under its oversight of the cleanup under MTCA, receives periodic monitoring reports of wells at the site from the PLPs. Ecology will consult with the PLPs on the request for routine distribution of all test well monitoring reports to appropriate staff of the Environmental Health Division of Public Health-Seattle and King County. This may be carried out by posting monitoring report content at Ecology's web site, or alerts with report submission if monitoring data are above cleanup levels at the site.

At present, the Agreed Order and its amendments do not specify such additional distributions, although these reports are available to the public or local agencies and readily available by request through Central Records (phone: 425-649-7190). Furthermore, Ecology will continue to communicate with the Environmental Health division and any other relevant agency if monitoring conditions change at this site.

- 9.6 The waste from the mine must be pre-treated to standards established by King County Wastewater Division's Industrial Pre-Treatment Program before it may be discharged into the wastewater system. The PLPs or the trustees are responsible for all fees associated with the permitting for such disposal and the ongoing service costs of sewer disposal.**

Ecology's Response:

Ecology shares this position and will continue to make sure that the PLPs meet the requirements.

- 9.7 We assume that the other institutional controls associated with the cleanup plan will conform to the requirements of the Model Toxics Control Act, including periodic review by the Department of Ecology and consultation with King County as the local and use authority King County's technical review group, comprised of myself and the staff copied below, is ready to work with you and your staff in the coming months to address these issues as the project moves forward.**

Ecology's Response:

Ecology shares this position and will continue to work toward ensuring these objectives.

Comment 10: Washington State Department of Fish and Wildlife

Key Concerns: Protection of Wildlife

- 10.1 WDFW trusts that Ecology will ensure that the water quality treatment facilities will intercept any toxic materials before they are discharged to the sanitary sewer system. Otherwise, that system would not be expected to adequately treat the water prior to its reaching Puget Sound, where it could enter the natural food chain and affect priority species, including Chinook salmon and Orcas, which are listed under the Endangered Species Act.**

Ecology's Response:

Ecology shares this position. We will continue to work toward achieving these objectives.

- 10.2 Also, WDFW has identified an area that is frequented by Roosevelt elk at the trench site. That area's value as elk habitat may be affected if it is capped.**

Ecology's Response:

The purpose of this proposal and comment period is for infrastructure at the north portal and not for capping in the trench area. The preferred alternative in the draft Cleanup Action Plan (dCAP) involves capping portions of the north subsidence trench where wastes were disposed of, and landscaping the cap to divert surface flow away from the trench. The dCAP will be finalized in the future and another public comment period is expected for the final Cleanup Action Plan, which will cover any capping activities at the trench. Therefore, the comment is more suited for the draft Cleanup Action Plan.

If capping is implemented, it is not expected to have adverse effects because through capping, wastes will be isolated from outside contact and new land surface will be created rather than the present deep sinkholes/trench areas. The areas where we plan to cap are relatively inaccessible due to the steep slopes and abrupt drop-off. These particular subsided areas are expected to contain hazardous wastes based on records of disposal at the north trench. For these reasons, the areas of concern for cleanup are not expected to be suitable habitat for wildlife and should not be left exposed.

-END OF PUBLIC COMMENTS RECEIVED AND RESPONSES-

Contact Information and Repositories

If you have questions about the site or this summary, please feel free to contact:

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Justine Asohmbom
Public Involvement Coordinator
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Information Repositories

You can review information about the site at the following locations:

- Maple Valley Library, 21844 SE 248th Street Maple Valley 98038 (425) 432-4620
- WA Department of Ecology Central Records, 3190 160th Avenue SE, Bellevue (425) 649-7190(call for an appointment)
- Ecology's web site:
http://www.ecy.wa.gov/programs/tcp/sites/landsburg_mine/landsburg_mine_hp.html

Appendix A: Glossary

Agreed Order: A legal agreement between Ecology and a potentially liable person to conduct work toward a cleanup.

Aquifer: A water-bearing layer of rock or sediment that is capable of yielding useable amounts of water. Drinking water and irrigation wells draw water from underlying aquifers.

Cleanup: Actions taken to deal with a release, or threatened release of hazardous substances that could affect public health and/or the environment. The term "cleanup" is often used broadly to describe various response actions or phases of remedial responses such as the remedial investigation/feasibility study.

Cleanup Action Plan (CAP): A document that explains which cleanup alternative(s) will be used at sites for the cleanup. The cleanup action plan is based on information and technical analysis generated during the remedial investigation/feasibility study and consideration of public comments and community concerns.

Comment Period: A time during which the public can review and comment on various documents and proposed actions. For example, a comment period may be provided to allow community members to review and comment on proposed cleanup action alternatives and proposed plans.

Contaminant: Any hazardous substance that does not occur naturally or occurs at greater than natural background levels and could have negative impacts on air, water, or soil.

Feasibility Study: This study is designed to develop and evaluate cleanup options for a given site (also see Remedial Investigation/Feasibility Study).

Groundwater: Water found beneath the earth's surface that fills pores between materials such as sand, soil, or gravel or that fills cracks in bedrock. In some aquifers, groundwater occurs in sufficient quantities that it can be used for drinking water, irrigation and other purposes.

Information Repository: A file containing current information, technical reports, and reference documents available for public review. The information repository is usually located in a public building that is convenient for local residents such as a public school, city hall, or library.

Model Toxics Control Act (MTCA): Legislation passed by citizens of the State of Washington through an initiative in 1988. Its purpose is to identify, investigate, and clean up facilities where hazardous substances have been released. It defines the role of Ecology and encourages public involvement in the decision making process. MTCA regulations became effective March 1, 1989 and are administered by the Washington State Department of Ecology.

Potentially Liable Person (PLP): Any individual(s) or company(s) potentially responsible for, or contributing to, the contamination problems at a site. Whenever

possible, Ecology requires these PLPs, through administrative and legal actions, to clean up sites.

Public Notice: A series of activities that provide adequate notice mailed to all persons who have made a timely request of Ecology and to persons residing in the potentially affected vicinity of the proposed action; mailed to appropriate news media; published in the local (city and county) newspaper of largest circulation; and the opportunity for the interested persons to comment.

Public Participation Plan: A plan prepared to encourage coordinated and effective public involvement designed to the public's needs at a particular site.

Remedial Investigation/Feasibility Study: Two distinct but related studies. They are usually performed at the same time, and together referred to as the "RI/FS." They are intended to:

- Gather the data necessary to determine the type and extent of contamination;
- Establish criteria for cleaning up the site;
- Identify and screen cleanup alternatives for remedial action; and
- Analyze in detail the technology and costs of the alternatives.

Responsiveness Summary: A summary of oral and/or written public comments received by Ecology during a comment period on key documents, and Ecology's responses to those comments. The responsiveness summary is especially valuable during the Cleanup Action Plan phase at a site when it highlights community concerns.

Risk: The chance that a hazardous substance, when released into the environment, will cause an adverse effect in the exposed humans or living organisms.

Site: Any building, structure, installation, equipment, pipe or pipeline (including any pipe into a sewer or publicly owned treatment works), well, pit, pond, lagoon, impoundment, ditch, landfill, storage container, motor vehicle, rolling stock, vessel, or aircraft; or any site or area where a hazardous substance, other than a consumer product in consumer use, has been deposited, stored, disposed of, or placed, or otherwise come to be located.

Toxicity: The degree to which a substance at a particular concentration is capable of causing harm to living organisms, including people, plants and animals.

Appendix B: Copies of Written Comments

Please note: Appendix B will not be available on the website.